REMARKS/ARGUMENTS

Claims 1-20 are currently pending in the present patent application.

In Section 1 of the Office Action mailed on November 28, 2008, in the above-referenced patent application, the Examiner objects to the drawings under 37 CFR § 1.83(a) asserting that the method of detecting short-burn threats must be shown (i.e., such as in a flow chart) or the feature(s) canceled from the claim(s). Applicants submit herewith replacement figures in which a short burn threat CBT is illustrated in Figure 2. These replacement figures introduce no new matter into the application. Moreover, methods of detecting short burn threats according to embodiments of the invention are described in the specification with reference to Figure 2 and thus are indeed shown in the figures. See paragraphs 26-34 for the description of these methods relating to Figure 2. No flowchart is necessary to understand the operation of the various components illustrated in Figure 2 and described in paragraphs 26-34.

In Section 2, the Examiner indicates that the instant application does not contain an abstract of the disclosure as required by 37 CFR § 1.72(b), and asserts that the only Abstract found in the application is the one on the first page of the WO 2008/027023 A2 document. Applicants have amended the specification via substitute specification (in both redline and accepted changes formats) to include an abstract on a separate sheet as required by the Examiner.

In Section 3, the Examiner indicates that the "Cross Reference to Related Applications" section on page 1 of the specification does not also indicate that the instant application is a 371 of PCT/US05/03811 filed February 7, 2005. Applicants have amended the specification via substitute specification to include suitable language under this section of the application.

In Section 4, the Examiner asserts that page 5, line 2, of the specification, cites "the near" but does not state exactly what the phrase "the near" refers to. Paragraph 14 of the specification has been amended via the substitute specification to correct this minor typographical error.

In Section 5, the Examiner indicates that the listing of references in the specification (see paragraph 35 of the specification) is not a proper information disclosure statement. The Examiner is correct. Accordingly, shortly after the filing of this amendment the undersigned will submit an Information Disclosure Statement and appropriate fee to properly submit these references for consideration by the Examiner. Copies of these references were not available on the filing date of this amendment.

In Section 7, the Examiner rejects claims 1-20 under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner alleges claim 1, line 4, cites "the detector" however the antecedent basis is "at least one temporal threat detector." With regard to claim 1, lines 7-8, the Examiner cites the language "operable to analyze the detection signal from each temporal threat detector as a function of time to detect the occurrence of a short-burn threat" and states this language is vague with respect to how time is being used here to detect the occurrence of a short-burn threat. The language indicates that the detection signal is analyzed "as a function of time" and thus the detection signal is analyzed over time. The recited detector is a "temporal threat detector" and in this sense the adjective "temporal" also indicates the detection relates to time. These same comments apply to the Examiner's rejection of claim 9.

Claims 5 and 14 have been amended to recite "a single sensor element" as suggested by the Examiner. These claims have also been amended to clarify the optics element recited therein. Other ones of the claims have been amended pursuant to the Examiner's comments and Section 112 rejections to correct any deficiencies that may have previously existed in the claims.

In Section 9, the Examiner rejects claims 16, 19 and 20 under 35 USC § 102(b) as being anticipated by US Patent No. 5,999,652 to Bushman (hereinafter "Bushman"). Claim 1 recites a threat launch detection system including at least one temporal threat detector. Each temporal threat detector includes a single sensing element operable to sense radiation from various types of short-burn threats that

occur within a field of view of the temporal threat detector, and to generate a detection signal in response to the sensed radiation. A processing circuit is coupled to each temporal threat detector and is operable to analyze the detection signal from each temporal threat detector as a function of time to detect the occurrence of a short-burn threat within the field of view of any of the temporal threat detectors.

Claim 1 expressly recites each temporal threat detector is operable to sense radiation from various types of short-burn threats. As described in paragraph 23 with reference to Figure 1, various short-burn threats and threat like events on the battlefield are distinct when observed or sensed at a frequency of 1000 Hz or above. Short-burn threats typically last 15 to 100 ms, making them difficult to sample at typical video frame rates inherent with the use of sensor arrays. See paragraph 43.

Bushman neither discloses nor suggests the detection of short-burn threats. The Bushman patent is directed to the detection of threats, such as aircraft or missile exhaust plumes or explosives time sequence differentiation images of such plumes or explosives. See Abstract. Bushman is directed to detecting the longer types of threats, such as an antiaircraft missile, as discussed in paragraphs 5 and 6 of the present application in contrast to "short-burn threats." To detect such threats Bushman states that "the standard scan rate of 30 Hz used in modern television systems is sufficiently high to eliminate all but the fastest moving object from the differential image" such that "only the missile exhaust or plume having a high modulation rate is observed in the differential image." See column 4, lines 36-46. As a result, Bushman not only does not but is not capable of detecting short-burn threats as recited in claim 1. This is true because at 30 Hz samples or frames are captured once every 33.33 ms. Thus, short-burn threats of less than 33.33 ms could be totally missed. Moreover, multiple samples are needed to detect a threat and so even for a 100 ms short-burn threat the number of samples of the threat may not be sufficient to enable proper identification of the threat. In contrast, at 1000 Hz sampling rate or greater, for example, at least 10 samples of such a short-burn threat could be captured to enable proper detection.

For at least these reasons, Bushman neither discloses nor suggests the recited processing circuit that analyzes the detection signal from each temporal threat detector as a function of time to detect the occurrence of a short-burn threat within the field of view of any of the temporal threat detectors. At the low sampling rate of Bushman, processing circuitry in Bushman simply cannot detect short-burn threats from the signals provided by the sensors. Accordingly, the combination of elements recited in claim 1 is allowable.

Dependent claims 2-8 are allowable for at least the same reasons as claim 1 and because of the additional limitations added by these dependent claims.

Independent claims 9 and 16 are allowable for reasons similar to those discussed above with regard to claim 1. Bushman neither discloses nor suggest the detection of short-burn threats as recited in both these claims. The claim that depend from independent claims 9 and 16 are allowable for the same reasons as the independent claim from which they depend and because of the additional limitations added by the dependent claims.

\\

\\

\\

\\

\\

\\

\\

\\

\\

The present patent application is in condition for allowance. Favorable consideration and a Notice of Allowance are respectfully requested. **Should the**

Examiner have any further questions about the application, Applicants respectfully request the Examiner to contact the undersigned attorney at (425) 455-5575 to arrange for a telephone interview to discuss the outstanding issues. If the need for any fee in addition to any fee paid with this response is found, for any reason or at any point during the prosecution of this application, kindly consider this a petition therefore and charge any necessary fees to Deposit Account 07-1897.

Respectfully submitted,

GRAYBEAL JACKSON LLP

/Paul F. Rusyn/

Paul F. Rusyn
Registration No. 42,118
Attorney for Applicants
155 – 108th Avenue NE, Suite 350
Bellevue, WA 98004-5973
(425) 455-5575 Phone
(425) 455-5575 Fax